

The National Drought Mitigation Center's Drought Risk Atlas

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Why a Drought Risk Atlas?



What can a Drought Risk Atlas do?

- Provide information the frequency and duration of drought for any location
- Detail the likelihood of drought in any particular year
- Allows for comparison of current droughts to historical events
- Provides probabilities of drought at any time of the year
- Identifies multiple stations for use in local analyses.



Data Criteria for the Drought Atlas

- ▶ Minimum of 40 years of Data
- ▶ No more than 2 consecutive months missing at any time in the period of record
- ▶ Established unique start dates for each station



What Questions Will the Atlas Answer?

- ▶ How does the drought compare historically?
- ▶ How often does a drought of this magnitude happen?
- ▶ When was the last time a drought like this happened?
- ▶ What is the likelihood of the drought continuing?
- ▶ What did the spatial footprint of the last drought look like?

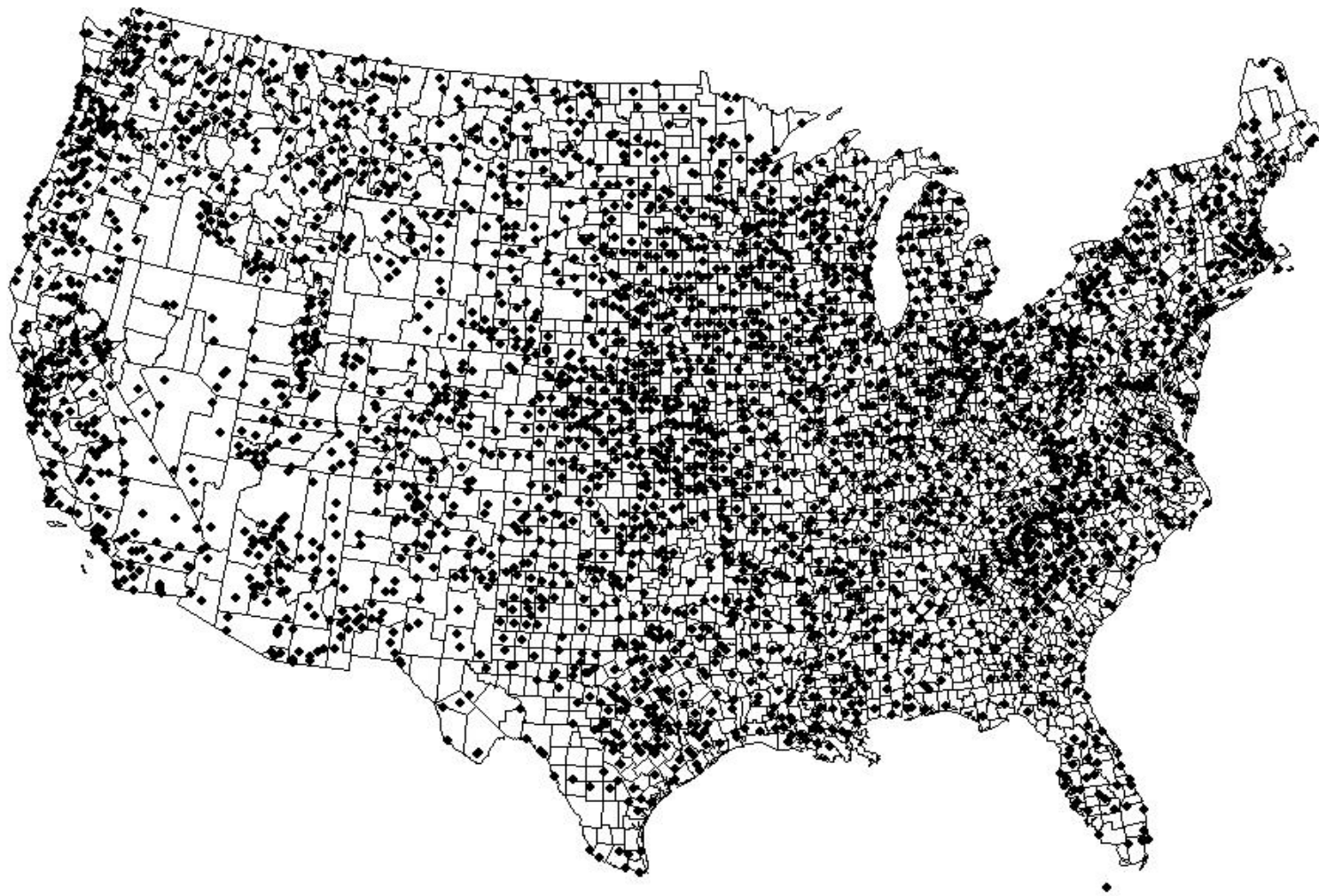


How was this accomplished?

- Using the best, most complete, long-term stations from the COOP network
- Calculating the climatology and various drought indices (SPI, SPEI, Deciles, PDSI, SC-PDSI, Drought Monitor)
- Providing the data for various time steps (weekly, monthly, annually)
- Gridded maps of each index for each aggregated timestep.

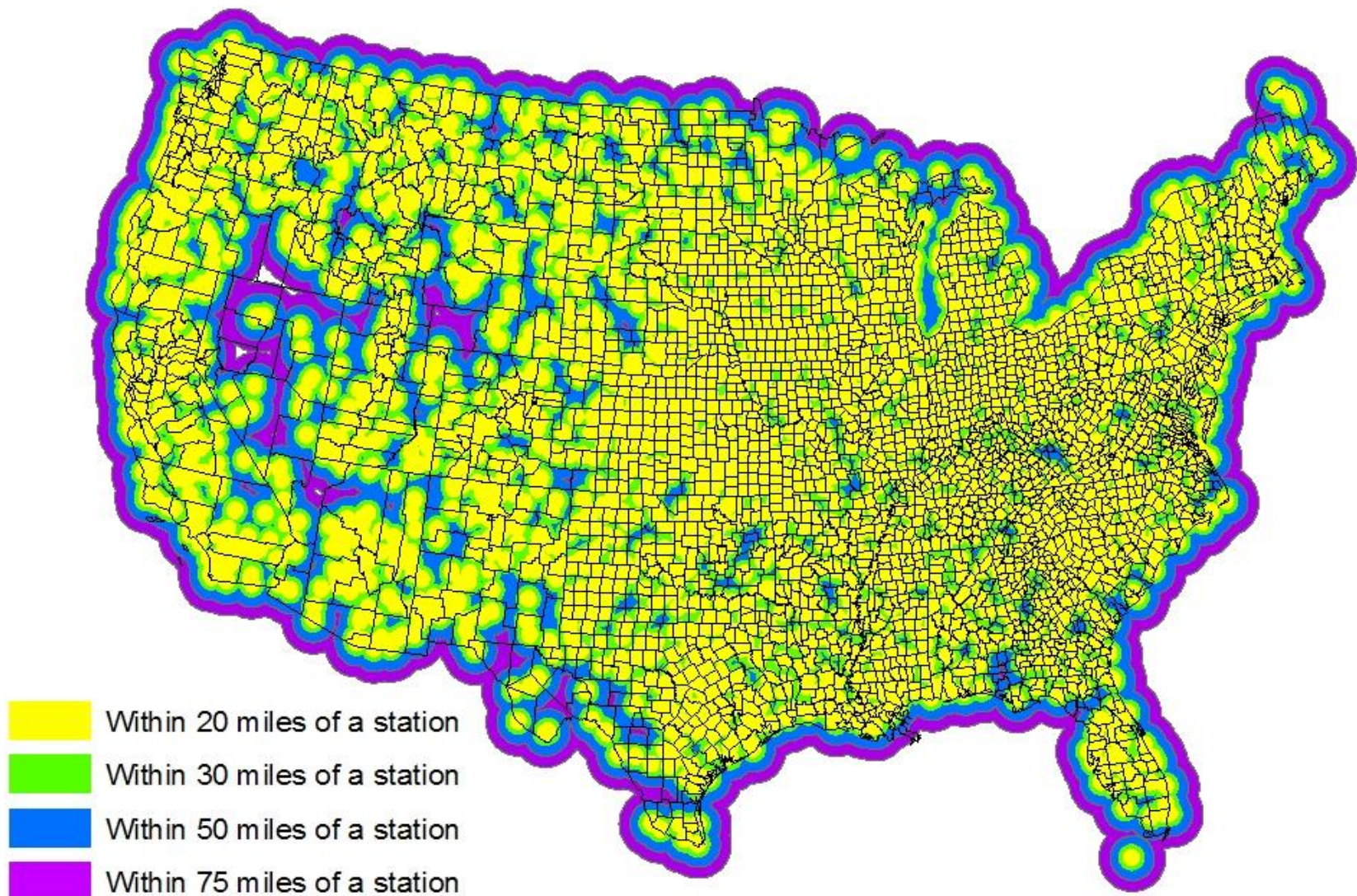


Stations with 40 Plus Years of Data

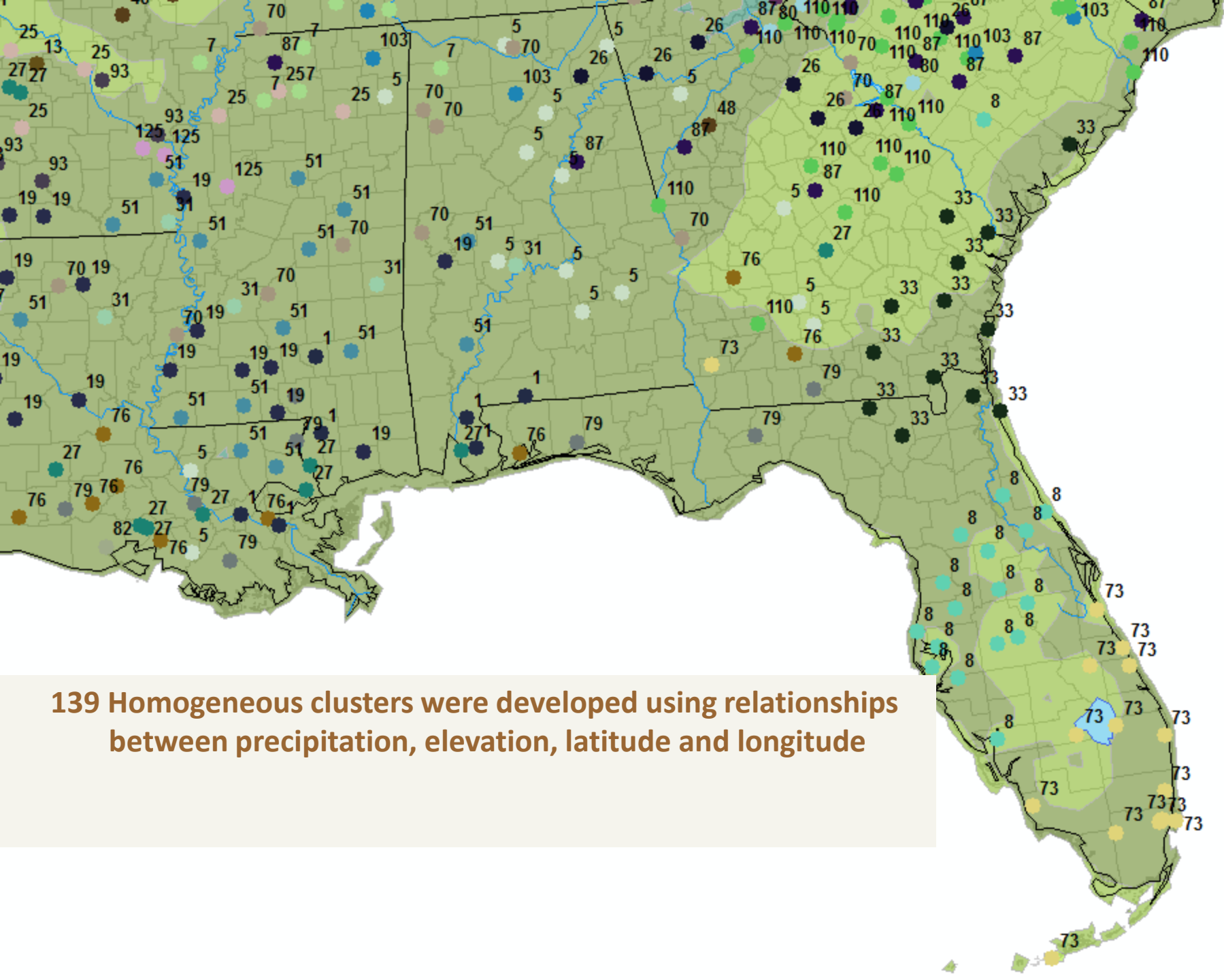


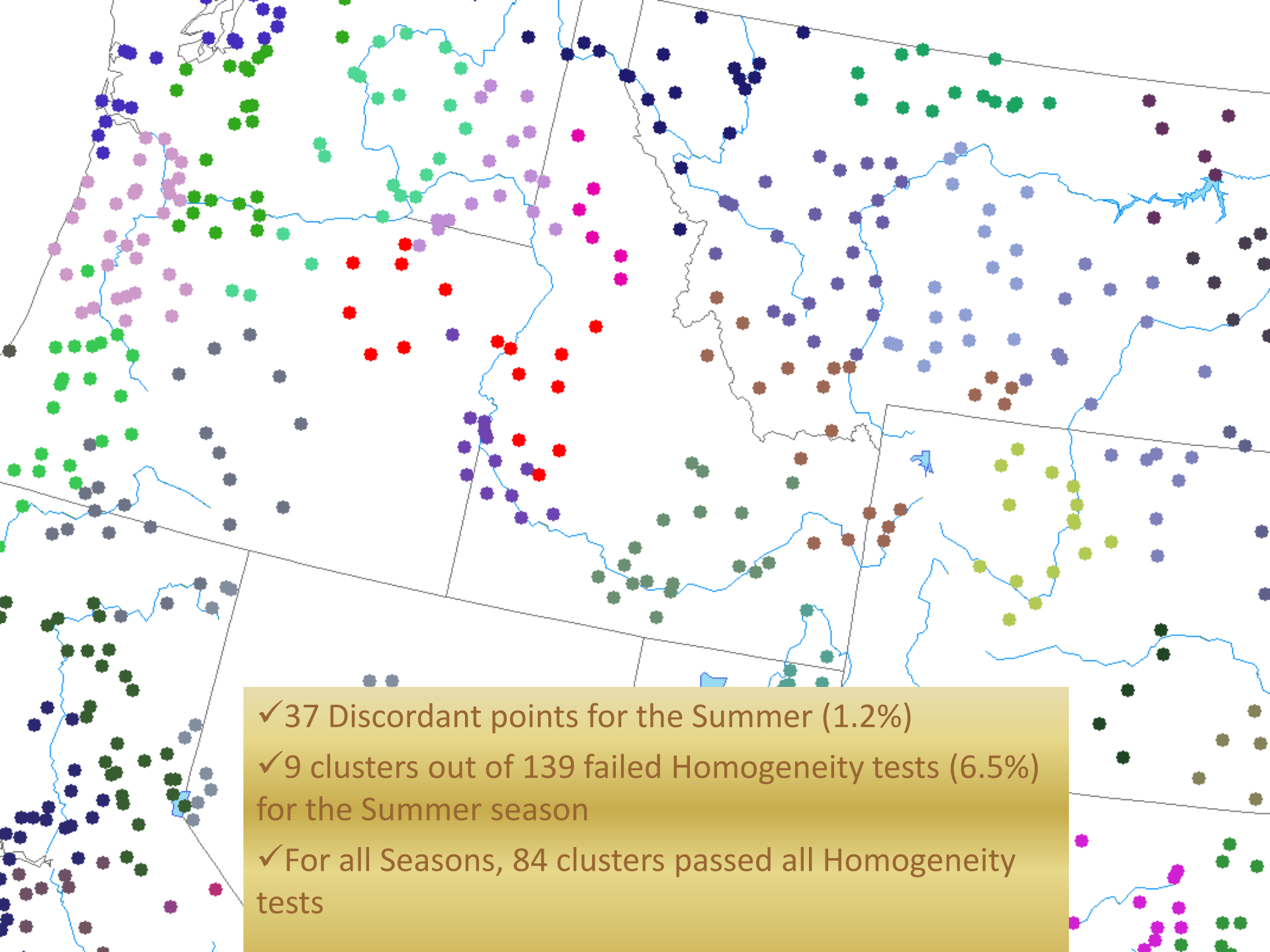
3059 Stations Total

Stations with 40 Plus Years of Data



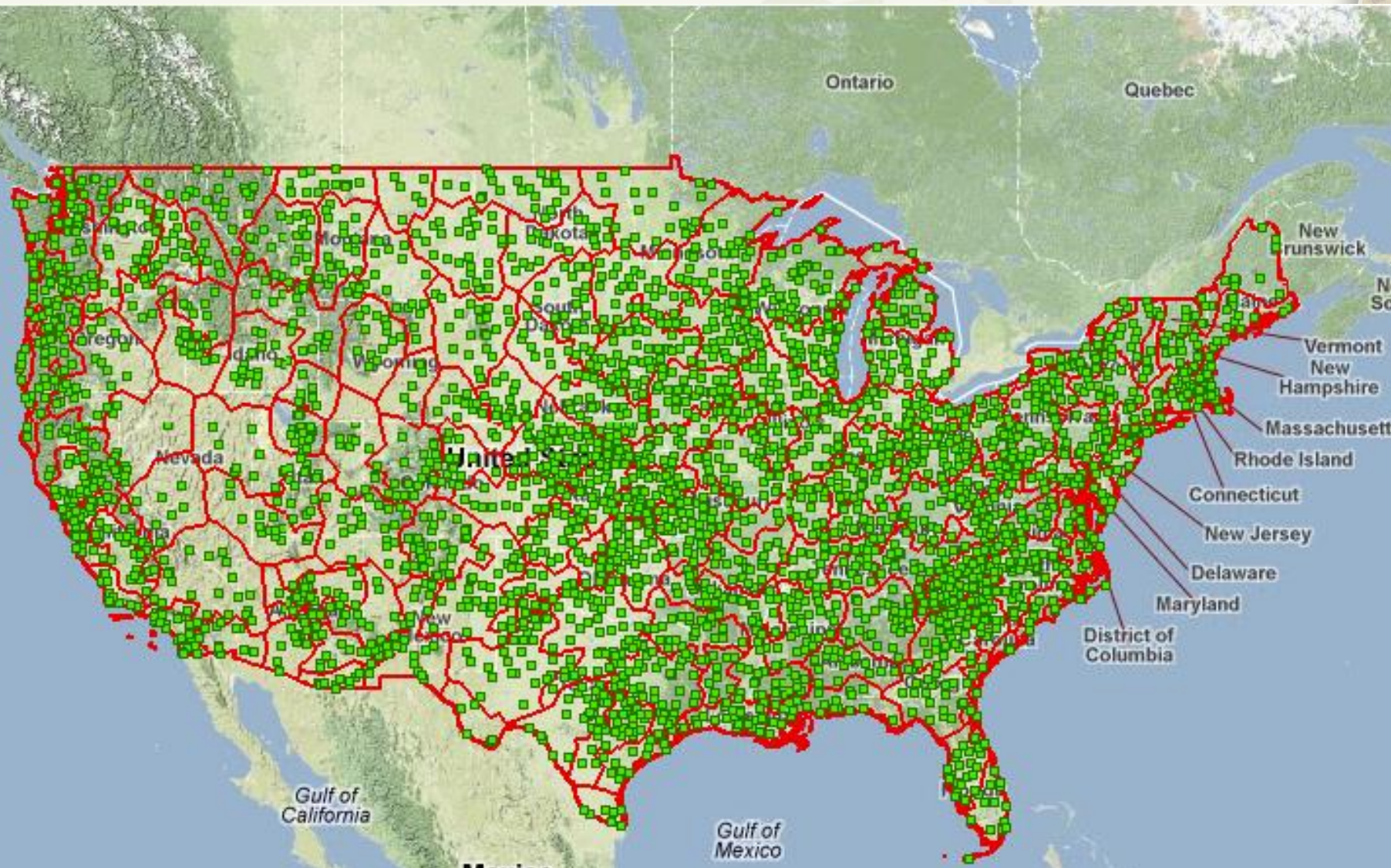
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- ✓ 37 Discordant points for the Summer (1.2%)
- ✓ 9 clusters out of 139 failed Homogeneity tests (6.5%) for the Summer season
- ✓ For all Seasons, 84 clusters passed all Homogeneity tests

DRA Stations and Climate Regime “Clusters”



Demonstration of NDMC's Drought Risk Atlas

▢ NDMC's Drought Risk Atlas

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Any Questions ?



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